FCC-B Radio Frequency Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the measures listed below.

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.

Notice 1

The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Notice 2

Shielded interface cables and A.C. power cord, if any, must be used in order to comply with the emission limits.

VOIR LA NOTICE D'NSTALLATION AVANT DE RACCORDER AU RESEAU.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and

(2) this device must accept any interference received, including interference that may cause undesired operation

Copyright Notice

Trademarks

Safety Instructions

1. Always read the safety instructions carefully.
2. Keep this User Manual for future reference.
3. Keep this equipment away from humidity.
4. Lay this equipment on a reliable flat surface before setting it up.
5. The openings on the enclosure are for air convection hence protects the equipment from overheating. Do not cover the openings.
6. Make sure the voltage of the power source and adjust properly 110/220V before connecting the equipment to the power inlet.
7. Place the power cord such a way that people can not step on it. Do not place anything over the power cord.
8. Always Unplug the Power Cord before inserting any add-on card or module.
9. All cautions and warnings on the equipment should be noted.
10. Never pour any liquid into the opening that could damage or cause electrical shock.
11. If any of the following situations arises, get the equipment checked by a service personnel:
    - The power cord or plug is damaged.
    - Liquid has penetrated into the equipment.
    - The equipment has been exposed to moisture.
    - The equipment does not work well or you can not get it work according to User Manual.
    - The equipment has dropped and damaged.
    - The equipment has obvious sign of breakage.
12. Do not leave this equipment in an environment unconditioned, storage temperature above 60° C (140°F), it may damage the equipment.

CAUTION: Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer.

廢電池請回收

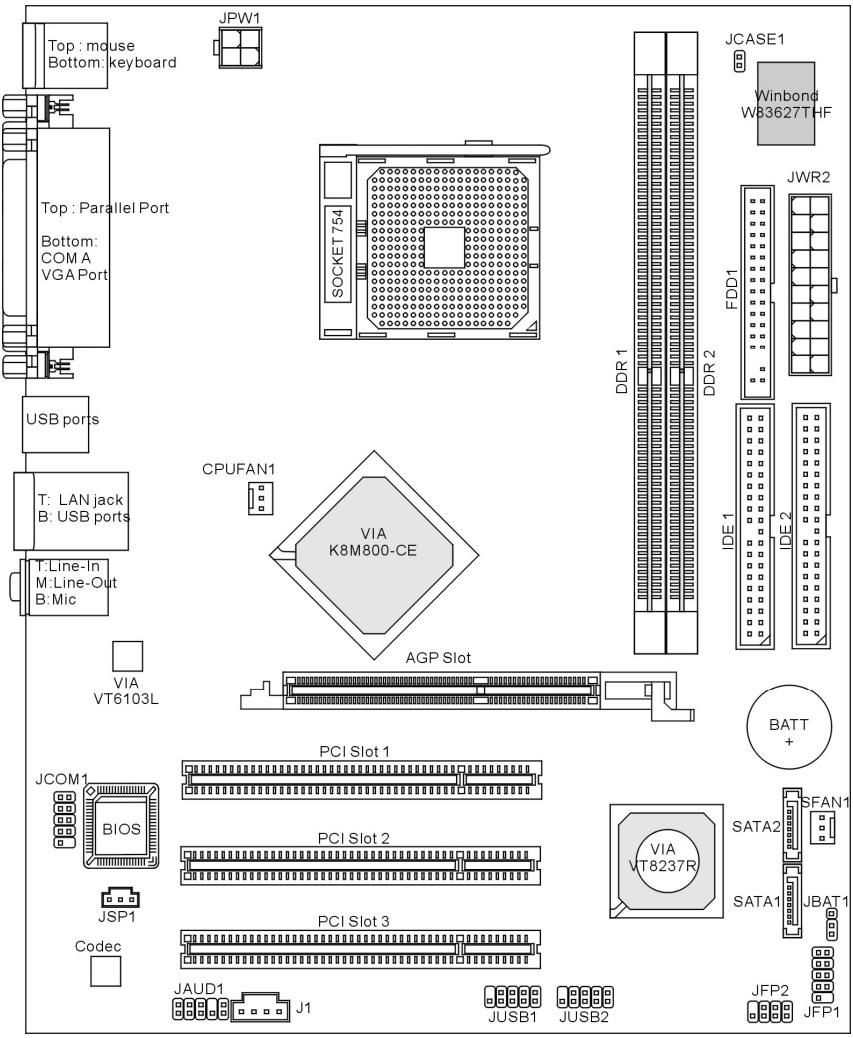
For better environmental protection, waste batteries should be collected separately for recycling or special disposal.

CONTENTS

Introduction

Thank you for choosing the KVM800M7-U Series micro ATX mainboard. The KVM800M7-U Series is based on VIA® K8M800-CE & VT8237R chipsets for optimal system efficiency. Designed to fit the advanced AMD® K8 Athlon64 processors in 754 pin package, the KVM800M7-U Series delivers a high performance and professional desktop platform solution.

Layout



Specifications

CPU

- Supports 64-bit AMD®K8 Athlon64 processor (Socket 754)
- Supports 3700+ and higher CPU

Chipset

- VIA® K8M800-CE chipset
  - -HyperTransport™ connection to AMD K8 Athlon64 processor
  - - 8 or 16 bit control/address/data transfer both directions
  - - 800/600/400/200 MHz “Double Data Rate” operation both direction
  - - AGP v3.0 compliance with 8x transfer mode
  - - Graphics integrated
- VIA® VT8237R chipset
  - - Supports dual channel native SATA controller up to 150MB/s
  - - Integrated Hardware Sound Blaster/Direct Sound AC97 audio
  - - Ultra DMA 66/100/133 master mode PCI EIDE controller
  - - ACPI & PC2001 compliant enhanced power management
  - - Supports USB2.0 up to 8 ports
  - - Supports RAID0 or RAID1

Main Memory

- Supports DDR266/333/400 DDR SDRAM for two 184-pin DDR DIMMs
- Supports a maximum memory size of 2GB

Slots

- One (Accelerated Graphics Port) AGP slot.
  - -AGP 3.0 specification compliant
- Three 32-bit Master 3.3v/5v PCI Bus slots

Onboard IDE

- An IDE controller on the VIA® VT8237R chipset provides IDE HDD/CD-ROM with PIO, Bus Master and Ultra DMA 66/100/133 operation modes

- Can connect up to 4 IDE devices
- Serial ATA/150 controller integrated by VT8237R
  - Up to 150MB/s transfer rate
  - Can connect up to two serial ATA devices

Onboard Peripherals

- On-Board Peripherals include:
  - 1 floppy port supports 1 FDD with 360K, 720K, 1.2M, 1.44M and 2.88M
  - 1 serial port (COMA)
  - 1 VGA port
  - 1 parallel port supporting SPP/EPP/ECP mode
  - 8 USB2.0 ports (Rear*4/Front*4)
  - 1 Audio (Line-In/Line-Out/MIC) port
  - 1 RJ-45 LAN Jack
  - 2 IDE ports support 4 IDE devices
  - 2 serial ATA ports
  - 1 JCOM1 pin header

Audio

- 6-channel software audio codec VIA VT1617A
  - Compliance with AC97 v2.3 Spec.
  - Meets PC2001 audio performance requirement

LAN

- VIA® VT6103L 10/100 Mb/s phy
  - Compliant with PCI v2.2
  - Supports ACPI Power Management

BIOS

- The mainboard BIOS provides “Plug & Play” BIOS which detects the peripheral devices and expansion cards of the board automatically.

- The mainboard provides a Desktop Management Interface (DMI) function that records your mainboard specifications.

Dimension

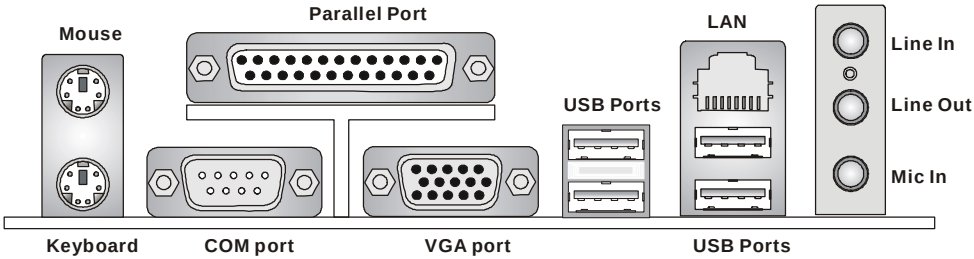
- Micro-ATX Form Factor: 243mm x 195mm

Mounting

- 6 mounting holes

Rear Panel

The back panel provides the following connectors:



Hardware Setup

This chapter tells you how to install the CPU, memory modules, and expansion cards, as well as how to setup the jumpers on the mainboard. It also provides the instructions on connecting the peripheral devices, such as the mouse, keyboard, etc. While doing the installation, be careful in holding the components and follow the installation procedures.

Central Processing Unit: CPU

The mainboard supports AMD® Athlon64 processor. The mainboard uses a CPU socket called Socket-754 for easy CPU installation. When you are installing the CPU, make sure the CPU has a heat sink and a cooling fan attached on the top to prevent overheating. If you do not have the heat sink and cooling fan, contact your dealer to purchase and install them before turning on the computer.

Example of CPU Core Speed Derivation Procedure

If	CPU Clock	=	200MHz
	Core/Bus ratio	=	12
then	CPU core speed	=	Host Clock x Core/Bus ratio
		=	200MHz x 12
		=	2.4 GHz

Memory Speed/CPU FSB Support Matrix

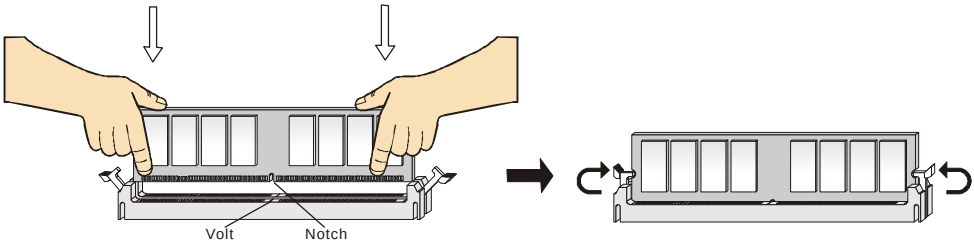
Memory / FSB	DDR 266	DDR 333	DDR 400
800 MHz	OK	OK	OK

Memory

The mainboard provides two 184-pin unbuffered DDR266/DDR333/DDR400 DDR SDRAM, and supports the memory size up to 2GB. To operate properly, at least one DIMM module must be installed. Install at least one DIMM module on the slots. Memory modules can be installed on the slots in any order. You can install either single- or double-sided modules to meet your own needs.

Installing DDR Modules

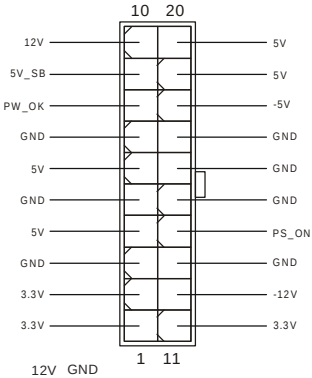
1. The DDR DIMM has only one notch on the center of module. The module will only fit in the right orientation.
2. Insert the DIMM memory module vertically into the DIMM slot. Then push it in until the golden finger on the memory module is deeply inserted in the socket.
3. The plastic clip at each side of the DIMM slot will automatically close.



Power Supply

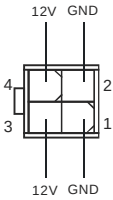
The mainboard supports ATX power supply for the power system. Before inserting the power supply connector, always make sure that all components are installed properly to ensure that no damage will be caused. A 300W or above power supply is suggested.

ATX 20-Pin Power Connector: CONN1



This connector allows you to connect to an ATX power supply. To connect to the ATX power supply, make sure the plug of the power supply is inserted in the proper orientation and the pins are aligned. Then push down the power supply firmly into the connector.

ATX 12V Power Connector: JPW1

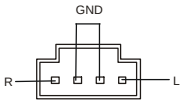


This 12V power connector is used to provide power to the CPU.

Floppy Disk Drive Connector: FDD1

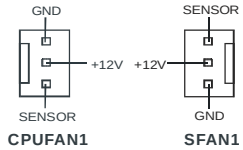
The mainboard provides a standard floppy disk drive connector that supports 360K, 720K, 1.2M, 1.44M and 2.88M floppy disk types.

CD-In Connector: J1



The connector is for CD-ROM audio connector.

Fan Power Connectors: CPUFAN1/SFAN1

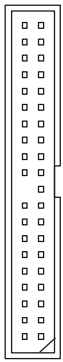


The CPUFAN1 (processor fan) and SFAN1 (system fan) support system cooling fan with +12V. They support three-pin head connector. When connecting the wire to the connectors, always take note that the red wire is the positive and should be connected to the +12V, the black wire is Ground and should be connected to GND. If the mainboard has a System Hardware Monitor chipset on-board, you must use a specially designed fan with speed sensor to take advantage of the CPU fan control.

NOTE

Always consult the vendors for proper CPU cooling fan.

IDE Connectors: IDE1/IDE2



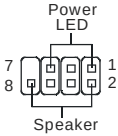
The mainboard has a 32-bit Enhanced PCI IDE and Ultra DMA 33/66/100/133 controller that provides PIO mode 0~4, Bus Master, and Ultra DMA 33/66/100/133 function. You can connect up to four hard disk drives, CD-ROM, 120MB Floppy and other devices. The first hard drive should always be connected to IDE1. IDE1 can connect a Master and a Slave drive. You must configure second hard drive to Slave mode by setting the jumper accordingly. IDE2 can also connect a Master and a Slave drive.

NOTE

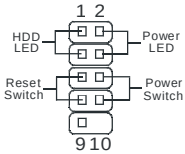
If you install two hard disks on cable, you must configure the second drive to Slave mode by setting its jumper. Refer to the hard disk documentation supplied by hard disk vendors for jumper setting instructions.

Front Panel Connectors: JFP1/JFP2

The mainboard provides two front panel connectors for electrical connection to the front panel switches and LEDs. JFP1 is compliant with Intel Front Panel I/O Connectivity Design Guide.



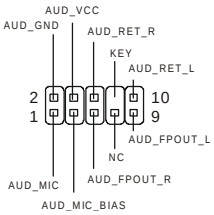
JFP2



JFP1

Front Panel Audio Connector: JAUD1

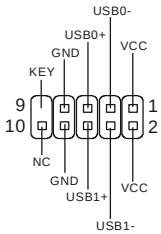
The front panel audio connector allows you to connect to the front panel audio and is compliant with Intel® Front Panel I/O Connectivity Design Guide.



NOTE

If you do not want to connect to the front audio header, pins 5 & 6, 9 & 10 have to be jumpered in order to have signal output directed to the rear audio ports. Otherwise, the Line-Out connector on the back panel will not function.

Front USB Connector: JUSB1/JUSB2

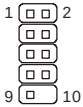


The mainboard provides two standard USB 2.0 pin headers JUSB1&JUSB2. USB2.0 technology increases data transfer rate up to a maximum throughput of 480Mbps, which is 40 times faster than USB 1.1, and is ideal for connecting high-speed USB interface peripherals such as USB HDD, digital cameras, MP3 players, printers, modems and the like.

NOTE

Note that the pins of VCC and GND must be connected correctly, or it may cause some damage.

Serial Port Connector: JCOM1



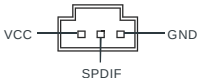
The main board offers one serial port COM2. It is 16550A high speed communication port that sends/receives 16 bytes FIFOs. You can attach a serial mouse or other serial device directly to it.

PIN	SIGNAL	DESCRIPTION	PIN	SIGNAL	DESCRIPTION
1	DCD	Data Carry Detect	6	DSR	Data Set Ready
2	SIN	Serial In or	7	RTS	Request To Send
3	SOUT	Receive Data	8	CTS	Clear To Send
4	DTR	Serial Out or	9	RI	Ring Indicate
5	GND	Transmit Data			

Chassis Intrusion Switch Connector: JCASE1

This connector is connected to 2-pin connector chassis switch. If the Chassis is open, the switch will be short. The system will record this status. To clear the warning, you must enter the BIOS setting and clear the status.

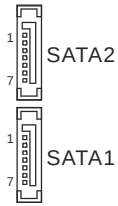
SPDIF-Out Connector: JSP1



This connector is used to connect SPDIF (Sony & Philips Digital Interconnect Format) interface for digital audio transmission.

Serial ATA HDD Connectors: SATA1/SATA2

The mainboard provides dual high-speed Serial ATA interface ports. The ports support 1st generation Serial ATA data rates of 150 MB/s and are fully compliant with Serial ATA 1.0 specifications. Each Serial ATA connector can connect to 1 hard disk drive.



PIN	SIGNAL	PIN	SIGNAL
1	GND	2	TXP
3	TXN	4	GND
5	RXN	6	RXP
7	GND		

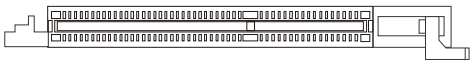
Clear CMOS Jumper: JBAT1

There is a CMOS RAM on board that has a power supply from external battery to keep the data of system configuration. With the CMOS RAM, the system can automatically boot OS every time it is turned on. If you want to clear the system configuration, use the JBAT1 (Clear CMOS Jumper) to clear data. Follow the instructions below to clear the data:

NOTE

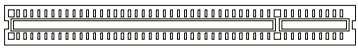
You can clear CMOS by shorting 2-3 pin while the system is off. Then return to 1-2 pin position. Avoid clearing the CMOS while the system is on; it will damage the mainboard.

AGP (Accelerated Graphics Port) Slot



The AGP slot allows you to insert the AGP graphics card. AGP is an interface specification designed for the throughput demands of 3D graphics. It introduces a 66MHz, 32-bit channel for the graphics controller to directly access main memory.

PCI (Peripheral Component Interconnect) Slots



The PCI slots allow you to insert the expansion cards to meet your needs. When adding or removing expansion cards, make sure that you unplug the power supply first. Meanwhile, read the documentation for the expansion card to make any necessary hardware or software settings for the expansion card, such as jumpers, switches or BIOS configuration.

PCI Interrupt Request Routing

The IRQ, abbreviation of interrupt request line and pronounced I-R-Q, are hardware lines over which devices can send interrupt signals to the microprocessor. The PCI IRQ pins are typically connected to the PCI bus INT A# ~ INT D# pins as follows:

	Order1	Order2	Order3	Order4
PCI Slot 1	INT A#	INT B#	INT C#	INT D#
PCI Slot 2	INT B#	INT C#	INT D#	INT A#
PCI Slot 3	INT C#	INT D#	INT A#	INT B#

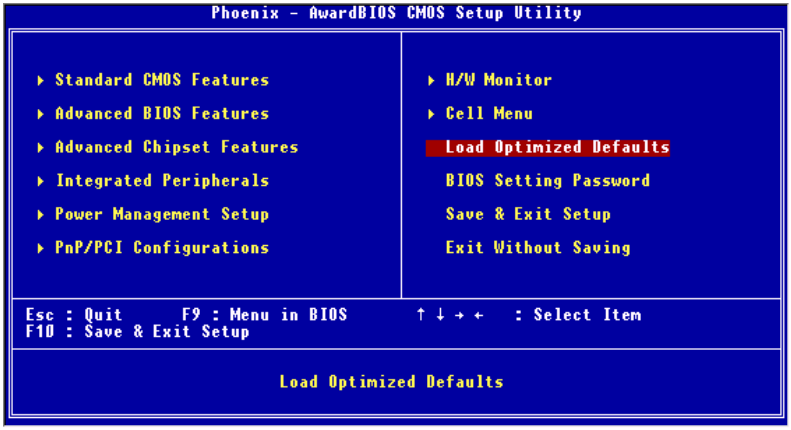
BIOS Setup

Power on the computer and the system will start POST (Power On Self Test) process. When the message below appears on the screen, press <DEL> key to enter Setup.

DEL: Setup **F11: Boot Menu** **TAB: Logo**

If the message disappears before you respond and you still wish to enter Setup, restart the system by turning it OFF and On or pressing the RESET button. You may also restart the system by simultaneously pressing <Ctrl>, <Alt>, and <Delete> keys.

Main Page



Standard CMOS Features
Use this menu for basic system configurations, such as time, date etc.

Advanced BIOS Features
Use this menu to setup the items of Award special enhanced features.

Advanced Chipset Features
Use this menu to change the values in the chipset registers and optimize your system performance.

Integrated Peripherals
Use this menu to specify your settings for integrated peripherals.

Power Management Setup
Use this menu to specify your settings for power management.

PNP/PCI Configurations
This entry appears if your system supports PnP/PCI.

H/W Monitor
This entry shows the status of your CPU, fan, warning for overall system status.

Cell Menu
Use this menu to specify your settings for frequency/voltage control.

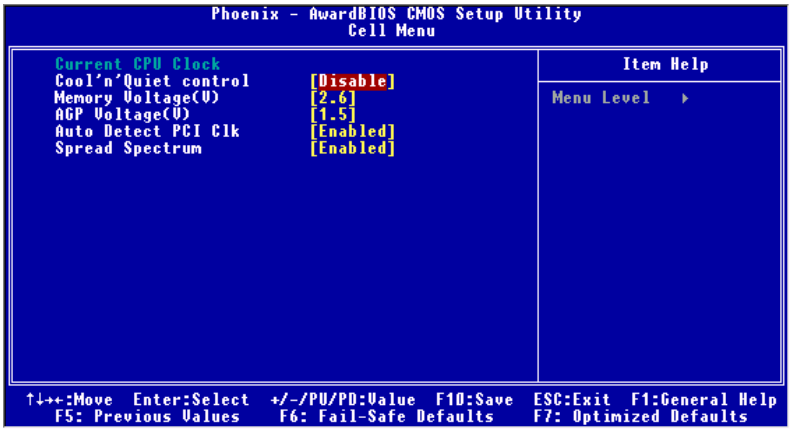
Load Optimized Defaults
Use this menu to load factory default settings into the BIOS for stable system performance operations.

BIOS Setting Password
Use this menu to set BIOS setting Password.

Save & Exit Setup
Save changes to CMOS and exit setup.

Exit Without Saving
Abandon all changes and exit setup.

Cell Menu



Current CPU Clock

It shows the current clock of CPU. Read-only.

Cool'n'Quiet control

It provides a CPU temperature detecting function to prevent your CPU's from overheading due to the heavy working loading.

Memory Voltage (V)

Adjusting the DDR voltage can increase the DDR speed. Any changes made to this setting may cause a stability issue, so changing the DDR voltage for long-term purpose is NOT recommended.

AGP Voltage (V)

AGP voltage is adjustable in the field, allowing you to increase the performance of your AGP display card when overclocking, but the stability may be affected.

Auto Detect PCI Clk

This item is used to auto detect the PCI slots. When set to [Enabled], the system will remove (turn off) clocks from empty PCI slots to minimize the electromagnetic interference (EMI).

Spread Spectrum

When the motherboard's clock generator pulses, the extreme values (spikes) of the pulses creates EMI (Electromagnetic Interference). The Spread Spectrum function reduces the EMI generated by modulating the pulses so that the spikes of the pulses are reduced to flatter curves. If you do not have any EMI problem, leave the setting at Disabled for optimal system stability and performance. But if you are plagued by EMI, set to Enabled for EMI reduction. Remember to disable Spread Spectrum if you are overclocking because even a slight jitter can introduce a temporary boost in clock speed which may just cause your overclocked processor to lock up.